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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,931	01/16/2001	Bi Le-Khac	01-2532B	4319
24114	7590	04/26/2004	EXAMINER	
LYONDELL CHEMICAL COMPANY 3801 WEST CHESTER PIKE NEWTOWN SQUARE, PA 19073			ZALUKAEVA, TATYANA	
		ART UNIT	PAPER NUMBER	
		1713		

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/760,931	BI LE-KHAC ET AL	
	Examiner Tatyana Zalukaeva	Art Unit	1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 November 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5, 7,9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

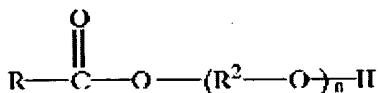
Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-5, 7 and 9 stand rejected under 35 U.S.C. 102(e) as being anticipated by McDaniel et al (U.S. 6,034,208), as per reasons set forth in the previous Office Action on the merits.

Mcdaniel discloses a continuous method (col.8, lines 38-41,) of copolymerization of unsaturated macromonomers presented by a general formula in lines 60-65 of col. 2



(this corresponds to a **polyether macromonomer** of the instant claim 1) and **another acrylic comonomer to be copolymerized** with the unsaturated macromonomer, which may be present in the form of a free carboxylic acid, a salt of a carboxylic acid, a hydroxyalkyl ester of a carboxylic acid, or an anhydride. Preferably, the structure of the comonomer corresponds to the formula in line 5 of col. 7. Specific illustrative comonomers include, but are not limited to, maleic acid, fumaric acid, citraconic acid, maleic anhydride, **hydroxyethylacrylate**, **hydroxypropylacrylate**, **hydroxyethylmethacrylate**, **hydroxypropylmethacrylate**; citraconic anhydride, acrylic acid, methacrylic acid, and alkali metal, alkaline earth metal, ammonium, and alkyl ammonium salts of the aforementioned acids. Acrylic acid is particularly preferred. (see paragraph bridging col.7 and 8). Polymerization temperature is from 0° to 150°C (co. 8,

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lines 36, 37). Working Examples 7, 8, 9 and Example C2 give the specific values of temperature: 85°, 70°, and 60° respectively.

Suitable initiators are described in col. 8, lines 7-20. The number average molecular weight may also be controlled as may be desired to influence the performance of the copolymer as a cement additive. Chain transfer agents of the type conventionally used in free radical polymerization such as dodecylmercaptan or mercaptoacetic acid may be utilized for such purpose. Typically the chain transfer agent will be present at a concentration of from about 0.1 to about 5.0 weight percent based on the total weight of the feed to the reactor. (col. 7, 46-56)

A solvent is presently utilized if the macromonomer(s) and comonomer(s) are not miscible under the copolymerization conditions. The solvent to be used in the copolymerization may be any substance in which the macromonomer and other monomers are soluble, with the preferred solvents being water, lower aliphatic alcohols such as methanol, ethanol, isopropanol and the like and mixtures thereof (col. 7, lines 57-67). Following copolymerization any relatively volatile unreacted monomers are stripped from the product. (col. 8, lines 40, 41). This corresponds to the step of withdrawing the polymer from reaction zone. Since the process described by Mc Daniel is a continuous process it inherently assumes the continuous withdrawal of a polymer from reaction zone.

The process exemplified in working examples provides for forming a stream of monomers and initiator to the same extent as instantly claimed, and as described in the

instant Specification. This issue will be specifically addressed below in the section "Response to Arguments".

Response to Arguments

3. Applicant's arguments filed 11/14/2003 have been fully considered but they are not persuasive. The crux of Applicant's arguments is that McDaniel does not teach each and every element of the instant claims, and because of this the Examiner allegedly fails to follow the instruction of MPEP 2131.

This is not found persuasive, because the reference to McDaniel does teach all the elements of the instant claims to the EXTEND THE APPLICANTS PRESENTED THE CLAIMED INVENTION.

According to Applicant, McDaniel does not teach the step of continuously forming the monomer stream, and further states that two essential steams should be formed: monomer stream and initiator stream, and McDaniel does not teach forming these two steams.

However, nowhere in the claims it is recited that these two streams are formed separately. The steps of the process are interpreted as a) forming the feed of monomer(s) and initiator (b) polymerizing (c) withdrawing. Since the process of McDaniel is continuous, these continuous feeding, polymerization and withdrawal is inherent by the virtue of continuous process. It is further noted that the expression "initiator stream that contains a free radical initiator" as recited in claim 1 does not preclude other than initiator ingredients in the "initiator stream". To this end, Example 9 in col. 12 of McDaniel describes a steam of 0.068 mol of acrylic acid, 0.59 g of AIBN

and 1.11 g mercaptoethanoic acid that has been separately prepared (reads on initiator stream).

Applicant is further reminded that the identity required for anticipation is between the claimed subject matter and the subject matter disclosed by the reference; identity does not require the reference to disclose the same subject matter as described in the specification. See *Kalman vs. Kimberly Clark Corp.* 218 USPQ 781 (Fed. Cir. 1983), and that “[A]n Examiner has the duty to police the claim language by giving it the broadest possible interpretation”, *Springs Window Fashions LP v. Novo Industries L.P.*, 65, USPQ 2d 1826, 1830 (Fed. Cir. 2003). Furthermore, [A]s an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art...”. *In re Morris*, 44 USPQ 2d 1023,1027 (Fed. Cir. 1997). In light of the above Applicants arguments that the two separate streams are formed are much more specific than the claims. A claim is unpatentable if only one embodiment within its scope is unpatentable. “Claims are unpatentable when they are so broad as to read on obvious subject matter even though they likewise read on non-obvious subject matter” *In re Mraz*, 173 USPQ 25, 28 (CCPA 1972). A reference anticipates a claim , if it discloses the claimed invention such that a skilled artisan could take this teaching in combination with his own knowledge of the particular art and be in possession of the invention, as per *In re Graves*, 36 USPQ 2d 1697 (Fed. Cir. 1995), or *In re Sasse*, 207 USPQ 107 (CCPA 1980).

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And furthermore, when citing *In re Bond*, Applicants omitted the essence reciting that claims need not be in identical words as in the claims to be anticipatory. "... the disclosure in a reference must show the claimed elements arranged as in the claim, but need not be in identical words as used in the claim to be anticipatory. *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990).

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

April 21, 2004

